

Claims

What is claimed is:

- 1 A method for fabricating MOSFET for modifying Schottky Barrier and diminishing Carrier Injection Resistance, which comprises the steps of:
 - a.) providing a SOI (Silicon-On-Insulator) device, which has a substrate, an insulation layer formed on said substrate, and a silicon layer formed on said insulation layer;
 - b.) forming a MOS (Metal Oxide Semiconductor) on said SOI device in accordance with a standard process of semiconductors;
 - c.) depositing a metal layer on said SOI device and on said MOS; and
 - d.) reacting with said silicon layer to form a metal-silicide layer by a metal self-aligned process, and to form a high-density source region and a high-density drain region by a implant-to-silicide process for modifying Schottky Barrier and diminishing Carrier Injection Resistance.
- 2 The method of claim 1, wherein the step of reacting with said silicon layer to form a metal-silicide layer by a metal self-aligned process may be changed with the step of implant-to-metal process, which forms a high-density source region and a high-density drain region first, and then

reacts with said silicon layer to form said metal-silicide layer for modifying the Schottky Barrier for diminishing Carrier Injection Resistance.

- 3 The method of claim 1, after forming said metal-silicide layer further comprises the step of annealing process, wherein the implant-to-silicide for implanting carriers into said silicide layer processing, then processing the step of annealing.
- 4 The method of claim 1, wherein said MOS is selected from one of P-MOS or N-MOS.
- 5 The method of claim 1, wherein said MOS further comprises a channel between said source electrode and said drain electrode for carriers passing through.
- 6 The method of claim 1, wherein said substrate is selected from one of a silicon substrate or a glass substrate.
- 7 The method of claim 1, wherein said insulation layer is an oxide layer.